

OHMORI, K.
Appl. No. 10/622,566
July 11, 2005

AMENDMENTS TO THE DRAWINGS

The attached sheets of drawings include changes to Figs. 8-14. These sheets, which include Figs. 8-14, replace the original sheets including Figs. 8-14. These figures have been labeled "prior art."

Attachment: Replacement Sheets

REMARKS

This is in response to the Office Action dated February 9, 2005. New claims 15-18 have been added. Example support for new claims 15-18 may be found on pages 30 and 31 (where a method is discussed with respect to an OPC rule set) and on page 41 (where a method is discussed with respect to an OPC model set) of the instant specification. Thus, claims 1-18 are pending.

The Abstract and drawings have been amended as suggested by the Examiner. See sections 2 and 3 of the Office Action.

In paragraph 4 of the Office Action, claims 1 and 4 stand objected to for formality reasons. It appears as if this objection is based on the use of different language than that shown in Figs. 1 and 4. It is respectfully submitted that one skilled in the art would understand the meaning of the referenced phrases as used in these claims, and that these claims are clear. Thus, it is respectfully requested that the formality objection be withdrawn.

Claim 1 stands rejected as being allegedly anticipated by Yamamoto. This Section 102(e) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires "a first step of dividing original mask pattern data into a first plurality of regions each having a first size . . . a third step of dividing the original mask pattern data into a second plurality of regions each having a second size which is different from the first size." Thus, for example, a method has a step of dividing original mask pattern data into a first plurality of regions *each having a first size*. Optical proximity correction (OPC) may then be performed on each of the first plurality of regions. Another step includes dividing the original mask pattern data into a second plurality of regions *each having a second size different from the first size*.

Optical proximity correction may then be performed on the second plurality of regions.

Yamamoto fails to disclose or suggest the aforesaid quoted feature of claim 1.

However, Yamamoto does not disclose or suggest mask pattern data that is divided into a first plurality of regions *each having a first size*, OPC being performed on each of the plurality of first regions, the mask pattern data being divided into a *second plurality of regions each having a second size different than the first size*, and OPC performed on these regions. Yamamoto is entirely unrelated to the invention of claim 1 in this respect. Yamamoto does appear to disclose dividing pattern data into an area on which correction is made using correction values obtained in advance, and an area in which correction is made on the basis of correction values calculated by a simulation. However, Yamamoto does not disclose or suggest that each of the first plurality of regions has a first size, and that each of the second regions has a second size different than the first size.

Claim 1 also recites “when it is determined that there is non-matching data, *deleting the non-matching data from the first mask pattern data or the second mask pattern data* so as to create the mask pattern data for fabricating the circuit.” The Office Action appears to contend that Yamamoto discloses this and makes a general cite to column 20 as disclosing “deleting data.” However, applicant has reviewed col. 20 of Yamamoto and can find only one instance of the word “remove” – at lines 43-46; this cited portion relates to removing an influence in two-dimensional directions, which appears to be related to the generation of training data. This cited portion does not disclose deleting non-matching data from the first or second mask pattern data as required by claim 1. Moreover, the cited portion of col. 20 does not teach or suggest that there is any correlation between “removing the influence” and non-matching mask pattern data.

Thus, Yamamoto cannot anticipate claim 1 for the multiple reasons set forth above.

Claim 4 requires “a first step of dividing original mask pattern data into a first plurality of regions each having a first size . . . a third step of dividing the original mask pattern data into a second plurality of regions each having a second size which is different from the first size . . . when it is determined that the graphic pattern has a size outside the prescribed range as a result of the comparison performed in the sixth step, deleting a portion of the graphic pattern which is outside the prescribed range from the first mask pattern data or the second mask pattern data so as to create the mask pattern data for fabricating the circuit.” Yamamoto fails to disclose or suggest these features of claim 4.

Claim 8 requires “a first step of dividing original mask pattern data into a first plurality of regions each having a first size . . . a third step of dividing the original mask pattern data into a second plurality of regions each having a second size which is different from the first size . . . when it is determined that there is non-matching data, determining that the corrected mask pattern data has not been properly corrected and deleting the non-matching data from the corrected mask pattern data so as to create the mask pattern data for fabricating the circuit.” Again, Yamamoto fails to disclose or suggest these features of claim 8.

Claim 11 requires “a first step of dividing original mask pattern data into a first plurality of regions each having a first size . . . a third step of dividing the original mask pattern data into a second plurality of regions each having a second size which is different from the first size . . . when it is determined that the graphic pattern has a size outside the prescribed range as a result of the comparison performed in the sixth step, determining that the corrected mask pattern data has not been properly corrected and deleting a portion of the graphic pattern which is outside the prescribed range from the corrected mask pattern data so as to create the mask pattern data for fabricating the circuit.” Again, Yamamoto fails to disclose or suggest these features of claim 11.

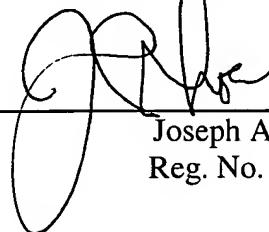
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For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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